

WHAT IS CLAIMED IS:

1. An information reproducing apparatus comprising:
 - a reading device for reading record information recorded on a recording
 - 5 medium and outputting a read signal;
 - an error correcting device for executing an error correction process with respect to the outputted read signal and outputting output data through the error correction process corresponding to the record information;
 - a memory device for buffering the output data; and
 - 10 a correction controlling device for altering the error correction process in said error correcting device depending on a memory status of said memory device, if in said error correcting device, an error is detected in the read signal and/or if an error ratio of the error becomes greater than a predetermined threshold value,
 - 15 wherein said memory device outputs at least temporarily the output data through the error correction process that is altered by said correction controlling device, if the error is detected and/or if the error ratio becomes greater than the predetermined threshold value.
- 20 2. The information reproducing apparatus according to claim 1, wherein the memory status of said memory device indicates data amount or level of the output data presently stored in said memory device.
3. The information reproducing apparatus according to claim 1, wherein
- 25 said memory device outputs a memory status information indicating the memory status to said correction controlling device, and

said correction controlling device alters the error correction process depending on the memory status indicated by the memory status information.

4. The information reproducing apparatus according to claim 1, wherein
5 said error correcting device outputs error information indicating the error detected in the read signal, and

said correction controlling device includes a judging device for judging whether or not the error is detected and/or whether or not the error ratio becomes greater than the predetermined threshold value.

10

5. The information reproducing apparatus according to claim 1, further comprising a signal processing device for executing a certain kind of signal process with respect to the read signal before the error correction process,

wherein said correction controlling device alters the signal process in
15 said signal processing device depending on the memory status in place of or in addition to the error correction process, if the error is detected and/or if the error ratio becomes greater than the predetermined threshold value.

6. The information reproducing apparatus according to claim 5, wherein
20 said signal processing device includes an equalizer for executing an equalizing process as the signal process with respect to the read signal.

7. The information reproducing apparatus according to claim 5, wherein
said correction controlling device assumes two cases on the basis of a
25 comparison of the memory status, which indicates data amount or level of the output data presently stored in said memory device, with a first predetermined

value, and, in one case, alters the error correction process, and in the other case, alters the signal process.

8. The information reproducing apparatus according to claim 1, further
5 comprising a variable moving device capable of moving with a variable parameter to define a part of reproducing conditions for the information reproducing apparatus,

wherein said correction controlling device alters the parameter for said variable moving device depending on the memory status in place of or in
10 addition to the error correction process, if the error is detected and/or if the error ratio becomes greater than the predetermined threshold value.

9. The information reproducing apparatus according to claim 8, wherein said variable moving device includes a spindle motor for rotating the recording
15 medium with a predetermined rotation number as the parameter.

10. The information reproducing apparatus according to claim 8, wherein said variable moving device includes a servo control device for executing a servo control with respect to said reading device with a predetermined servo
20 gain as the parameter.

11. The information reproducing apparatus according to claim 8, wherein said variable moving device includes a defect detecting device for executing a defect detection with respect to the read signal under a predetermined defect
25 setting condition as the parameter.

12. The information reproducing apparatus according to claim 8, wherein said correction controlling device assumes two cases on the basis of a comparison of the memory status, which indicates data amount or level of the output data presently stored in said memory device, with a second predetermined value, and, in one case, alters the error correction process, and
5 in the other case, alters the parameter.

13. The information reproducing apparatus according to claim 1, further comprising:

10 a signal processing device for executing a certain kind of signal process with respect to the read signal before the error correction process; and

a variable moving device capable of moving with a variable parameter to define a part of reproducing conditions for the information reproducing apparatus,

15 wherein said correction controlling device alters at least one of the signal process at the signal processing device and the parameter for said variable moving device depending on the memory status in place of or in addition to the error correction process, if the error is detected and/or if the error ratio becomes greater than the predetermined threshold value.

20 14. The information reproducing apparatus according to claim 13, wherein said correction controlling device assumes three cases on the basis of a comparison of the memory status, which indicates data amount or level of the output data presently stored in said memory device, with a first predetermined value as well as the memory status with a second predetermined value, and, in
25

a first case, alters the error correction process, in a second case, alters the signal process, and in a third case, alters the parameter.

15. The information reproducing apparatus according to claim 1, wherein
5 said correction controlling device alters the error correction process depending on the memory status, by altering at least one of a correction scheme and a repeating correction number of the error correction process.

16. The information reproducing apparatus according to claim 1, wherein it
10 is judged for each unit of data block for the error correction, which is set in advance, whether or not the error is detected and/or whether or not the error ratio becomes greater than the predetermined threshold value.

17. The information reproducing apparatus according to claim 1, wherein
15 said correction controlling device alters at least one of the error correction process, the signal process and the parameter, while preventing the memory status, which indicates data amount or level of the output data presently stored in said memory device, from becoming zero.

20 18. The information reproducing apparatus according to claim 1, wherein said correction controlling device terminates repeating the error correction process and controls said memory device to output the output data before the memory status, which indicates data amount or level of the output data presently stored in said memory device, becomes zero, if the error is detected
25 and/or if the error ratio becomes greater than the predetermined threshold

value, even after the error correction process is repeated a plenty of times with respect to the same record information.

19. The information reproducing apparatus according to claim 1, wherein
5 said correction controlling device repeats altering until the error is not detected and/or until the error ratio becomes less than the predetermined threshold value.

20. The information reproducing apparatus according to claim 1, wherein, if
10 the error is not detected and/or if the error ratio becomes less than the predetermined threshold value after executing the error correction process with altering at least one of the error correction process, the signal process and the parameter, said correction controlling device reset the altered one to an initial status thereof.

15

21. An information reproducing method comprising the processes of:

reading record information recorded on a recording medium and
outputting a read signal;

executing an error correction process with respect to the outputted read
20 signal and outputting output data through the error correction process corresponding to the record information;

buffering the outputted output data using a memory device; and

altering the error correction process depending on a memory status of
said memory device, if in the error correcting process, an error is detected in
25 the read signal and/or an error ratio of the error becomes greater than a predetermined threshold value,

wherein the output data through the error correction process that is altered at said altering process is outputted at least temporarily from said memory device, if the error is detected and/or if the error ratio becomes greater than the predetermined threshold value.

5

22. An error correction system provided for an information reproducing apparatus having a reading device for reading record information recorded on a recording medium and outputting a read signal, said error correction system comprising:

10 an error correcting device for executing an error correction process with respect to the outputted read signal and outputting output data through the error correction process corresponding to the record information;

a memory device for buffering the outputted output data; and

a correction controlling device for altering the error correction process in
15 said error correcting device depending on a memory status of said memory device, if in said error correcting device, an error is detected in the read signal and/or if an error ratio of the error becomes greater than a predetermined threshold value,

wherein said memory device outputs at least temporarily the output
20 data through the error correction process that is altered by said correction controlling device, if the error is detected and/or if the error ratio becomes greater than the predetermined threshold value.